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March 5, 2010

Marlene H. Dortch
Office of the Secretary
Federal Communications Commission
445 12th Street, SW
Suite TW-A325
Washington, DC 20554

Re: Ex Parte Notice, WC Docket No. 09-223
In the Matter of Cbeyond, Inc. Petition for Expedited Rulemaking to Require Unbundling of Hybrid, FTTH and FTTC Loops Pursuant to 47 U.S.C. § 251(c)(3) of the Act

Dear Ms. Dortch:

Covad Communications Company ("Covad") submits the attached Declaration of August H. Ankum, PH.D. and Olesya Denney, PH.D. of QSI Consulting, Inc. ("QSI") for consideration in the above-referenced proceeding. In this Declaration, QSI responds to several issues raised by Qwest Corporation ("Qwest") in its Reply Comments in WC Docket No. 09-223, concerning a study conducted by QSI on broadband network unbundling policies and the role of competition in the broadband market in the United States.[1] QSI rebuts all of Qwest's alleged criticisms.

The QSI Report reviewed the economic viability of (1) leasing ILEC facilities where UNEs were available and where they were not and (2) deploying and self-provisioning last-mile facilities to small and medium sized business customers. Based on its cost analysis, the QSI Report concluded that: (1) where last-mile UNEs are not available, a competitor cannot economically offer broadband retail products using an ILEC's facilities and (2) it is generally "cost prohibitive and economically non-viable" for a CLEC to self provision last-mile facilities in order to offer broadband services to a small or medium sized business customer.

In accordance with §1.1206 of the Commission rules, one copy of this letter is being filed electronically via ECFS.

Respectfully,

Anthony Hansel

Anthony Hansel

Enclosure

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[1] QSI Consulting, Inc., Viability of Broadband Competition in Business Markets, An Analysis of Broadband Network Unbundling Policies and CLEC Broadband Competition (dated January 21, 2010) ("QSI Report"). The QSI Report was filed by Covad in the above-referenced proceeding as Exhibit A to its Comments on January 22, 2010.

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of: Cbeyond, Inc. Petition for Expedited Rulemaking to Require Unbundling of Hybrid, FTTH, and FTTC Loops Network Elements Pursuant to 47 U.S.C. §251(c)(3) Ofthe Act	WC Docket No. 09-223

DECLARATION
OF
AUGUST H. ANKUM, PH.D.
OLESYA DENNEY, PH.D.

March 5, 2010

I. INTRODUCTION

A. QUALIFICATION OF WITNESSES

1. My name is Dr. August H. Ankum. I am a Senior Vice President at QSI Consulting, Inc., ("QSI"), a consulting firm specializing in economics, econometric analysis, and telecommunications cost modeling. My business address is 1027 Arch, Suite 304, Philadelphia, PA 19107.

2. My name is Olesya Denney. I am a senior consultant at QSI Consulting, Inc. My business address is 2230 Brandon Pl., West Linn, OR 97068.

B. PURPOSE AND SUMMARY OF CONCLUSIONS

3. The purpose of this Declaration is to evaluate and respond to issues raised by Qwest Communications International, Inc. in its February 22, 2010, Reply Comments,[1] regarding the QSI Study, filed January 22, 2010 by Covad Communications as Exhibit A to its Comments. Specifically, this Declaration will rebut Qwest's assertions regarding two sections of the QSI Study: 1) the economic viability of leasing facilities, and 2) the economic viability of CLEC self-provisioning.

4. Having reviewed Qwest's criticisms, we believe that the initial analysis of the QSI Study is sound and no changes are needed.

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[1] Hereinafter "Reply Comments" or "Qwest's Reply Comments."

II. REBUTTAL OF QWEST CRITICISMS REGARDING QSI STUDY'S ANALYSIS OF THE ECONOMIC VIABILITY OF LEASING FACILITIES

5. On page 24 through 27 of its Reply Comments, Qwest discusses the section of the QSI Study that analyzes the costs competitive local exchange carriers ("CLECs") would incur when they *lease* ILEC facilities (UNEs, collocation, special access circuits, etc.) in order to offer broadband services.

6. With respect to this section, Qwest's Reply Comments address a number of issues. First, on pp. 25-26 Qwest states that it was not able to match QSI's numbers contained in the table on pages 16 for Arizona and Washington (two Qwest's MSAs), which are tables that contain cost of leasing facilities for three scenarios. Qwest claims that because it was not able to match the numbers, QSI's analysis is incorrect. Second, on pp. 26-27 Qwest notes that table on page 18 of QSI's study uses numbers from the table on page 16. This table compares CLEC cost of leasing all-fiber facilities at current (special access) and cost-based rates. Qwest claims that since the source of the table on page 18 (the table on page 16) is incorrect, the analysis and table on page 18 are also incorrect. Qwest claims that if QSI used correct numbers, as well as the OC-3 UNE transport option, costs based on special access rates would be comparable to cost based on UNE (cost-based) rates. Third, on p. 26 Qwest observes that QSI's table on page 16 presents cost data for both TRRO-impaired and non-impaired wire centers. While acknowledging the differences in rates at which Qwest leases network in these two types of wire centers, Qwest claims that QSI study is misleading regarding the extent to which Qwest was granted non-impairment status. We explain below that Qwest is wrong on each point.

7. Qwest's first argument (pp. 25-26) is that it was not able to match QSI's numbers contained in the table on pages 16. Using the Arizona example, Qwest claims on page 25 that the correct estimate of the cost of leasing facilities for the scenario "all copper loops" in the "lowest cost zone" is $327.05, rather than the number $63.81 contained on page 16 of the QSI study. Qwest's number – $327.05 – is a result of summing UNE rates for **one 2-wire loop** ($9.05) and **one DS3 transport circuit** (which Qwest cited as being composed of two elements -- fixed rate of $159.00 and per mile rate of $15.9 times 10 miles).[2] This formula contains a fundamental flaw that discredits Qwest's critique on both the first and second points (critique of QSI tables on pages 16 and 18): Qwest incorrectly assumes that a full DS3 transport circuit (45 Mbps bandwidth) will be dedicated to serve a single customer to provide 5 Mbps bandwidth. In reality, transport circuits are *shared* between many customers, which results in scale economies. Not only can one DS3 transport channel accommodate 9 times (=45/5) the bandwidth required by one customer, but also the engineered transport capacity can be lower than the total maximum loop capacity (a phenomenon related to the concept of trunk blocking probabilities). In other words, a proper formula to calculate the cost of providing a 5Mbps service would include a *fraction* of DS3 transport channel, rather than a full DS3 transport channel as Qwest assumed.[3]

8. Two other errors taint Qwest's Arizona example. First, Qwest incorrectly assumes that QSI numbers in the table on page 16 would be based on only two rate elements – recurring loop and transport rates. Instead, as explained on page 15 of the QSI study, QSI numbers

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[2] See page 25 of Qwest's Reply comments. Mathematically, $327.05 = $9.05 + $159.00 + $15.90 * 10 miles.

[3] Cost estimates in the QSI Study are based on assumptions that the CLEC would purchase 2 copper loops for redundancy and that transport capacity needed is 5 times less than the maximum total loop capacity.

also include pro-rated nonrecurring loop and transport rates, the cost of cross-connect and collocation. Second, Qwest uses an incorrect UNE rate for Qwest's DS3 UNE transport in Arizona. While its per mileage rate is indeed $15.90 as reported in Qwest's Reply Comments, its fixed rate is not $159.00, but $246.16.[4] In contrast, QSI study uses correct Qwest's rates, resulting in accurate cost estimates in the table on page 16 of QSI study.

9. Qwest's second argument (pp. 26-27) is that since the source of the table on page 18 (the table on page 16) is incorrect, the analysis and table on page 18 are also incorrect. As explained above, Qwest's critique of the table on page 16 is without merit. Therefore, QSI conclusion that CLEC cost of leasing all-fiber facilities at current (special access) rates are higher than the underlying cost of these facilities still stands. Qwest's more narrow point that QSI's numbers for the "Cost Based But Not Available" scenario would be different if QSI had used the OC-3 UNE transport option is also incorrect: QSI did use this option (as is indicated in the sub-heading of data column "Cost Based But Not Available" included in the table on page 18).[5]

10. Qwest's third argument is that the QSI study is misleading regarding the extent to which Qwest was granted the non-impairment status (Qwest Reply Comments at p. 26). That argument is incorrect because QSI study did not portray *the extent* to which Qwest was granted non-impairment status. QSI study merely reported (in the table on page 16) the cost of leasing facilities in both impaired and non-impaired wire centers. Qwest does not deny that in both Phoenix and Seattle MSAs there are wire centers that reached the non-impaired

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[4] See section 9.6.3.2 of Qwest's SGAT (Exhibit A).

[5] For each MSA/ILEC QSI study compared the cost of both DS3 and OC-3 transport options and picked the lower-cost option. In case of Phoenix, Arizona MSA using OC-3 transport was slightly cheaper than using DS3 transport.

status with respect to DS3 transport. Qwest admits that a wire center in Seattle reached the non-impaired status with respect to DS1 loops. Qwest's only other relevant note is that currently DS1 loops are available at UNE rates in all Phoenix MSAs. This observation has only a minor effect on the study as it would affect only the last column of the table on page 16 of the QSI study (the Hybrid Loop Scenario): Based on Qwest's observation, the values in the last column for Phoenix, Arizona should say "not applicable." This alteration would remove the Phoenix MSA from the average measures (the two rows on the bottom of the table), and the numerical impact would be as follows: The "average lowest" value would become $614.46 (replacing $620.60), and the "average highest" value would become $696.34 (replacing $702.29). This minor alteration does not change any of QSI's qualitative conclusions.

III. REBUTTAL OF QWEST'S CRITICISMS REGARDING QSI STUDY'S ANALYSIS OF THE ECONOMIC VIABILITY OF CLEC SELF-PROVISIONING

11. On page 27 through 32 of its Reply Comments, Qwest discusses the section of the QSI study that examines whether self-provisioning of loop and transport fiber-optic facilities for the provision broadband services is an economically viable option. Qwest criticisms focus on four aspects of our study: 1) network architecture; 2) equipment and construction costs; 3) the flawed development of cost from investment through the use of annual charge factors and shared and common cost factors; and 4) the comparison of cost per unit and revenue per unit. In what follows, we will address Qwest's criticisms and show that they are misguided.

12. With respect to network architecture (issue #1), Qwest criticizes the QSI Study's use of an Add/Drop Mux ring node and suggests that it can be eliminated and replaced by a simpler

and cheaper "fiber distribution panel (fiber cross connect panel) where two fiber ring are cross connected to the fiber lateral."[6] Qwest criticism is misplaced for a number of reasons.

13. First, an Add/Drop Mux ring node is a standard configuration, used by both incumbent local exchange carriers ("ILECs") and competitive local exchange carriers ("CLECs"). By contrast, it is not common for carriers to build a metropolitan fiber ring and then cross-connect the ring fibers by means of a fiber distribution panel so that they become dedicated to just one fiber lateral (i.e., one location), as suggested by Qwest. In fact, this is not how Qwest typically constructs its fiber rings.[7]

14. Next, a fiber distribution panel does not have the remote automatic provisioning capabilities that an Add/Drop Mux node offers, and thus would necessitate additional site visits.

15. Last, Qwest predicates its suggestion on the assumption that only a single building will be served.[8] Thus, Qwest's substitute architecture strips the network of the necessary economies of scale, making self provisioning even less of an economically viable proposition. By contrast, the QSI Study assumes a network architecture that allows CLECs to serve *four* buildings of one Add/Drop Mux ring node[9] so that the fixed costs of the fiber

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6 Qwest Reply Comments at 28.

7 For example, see Minnesota PUC Docket No. P-421/AM-06-713, *In the Matter of Qwest Corporation's Application for Commission Review of TELRIC Rates Pursuant to 47 U.S.C § 251*, Qwest's May 25, 2006 filing, Attachment 2, Hicap Loops Model, file MN Loop HICAP Results.xls (Public).

8 Qwest Reply Comments at 28.

9 QSI Study at 27.

laterals, fiber ring and other back office costs can be spread over a much larger number of customers, thus lowering the per-customer cost.

16. With respect to equipment and construction costs (issue #2), Qwest criticizes the QSI Study's use of per foot fiber cost found in the Gates Foundation, and suggests that there are other means of placing fiber laterals.[10] The Gates Foundation's estimates, however, are reasonable and consistent with our own experience. Further, Qwest fails to provide alternative per foot fiber cost estimates. Qwest simply notes that it offers innerduct and microduct to CLECs at low rates, but that is no alternative to the Gates Foundation's estimates since innerduct and microduct are but one component of placing fiber facilities and Qwest totally ignores other costs such as the material costs of the fiber, installation/placement costs, etc. Further invalidating the criticisms is that Qwest qualifies its offer of innerduct and microduct with the caveat that they are offered only "when available."

17. Qwest also criticizes our use of CISCO equipment.[11] CISCO, however, is a major provider of Add/Drop mulitplexers, and a vendor for many of CLECs, and Qwest fails to explain why the specific CISCO equipment is inappropriate or outdated, nor does Qwest identify alternative providers of more efficient, state-of-the-art equipment. As for whether CLECs are able to procure facilities at the same prices as Qwest, or other RBOCs, it is well established that CLECs generally pay higher prices, and do not receive the discounts of RBOCs, due to a lack of purchasing power and equipment volumes.

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[10] Qwest Reply Comments at 29.

[11] Qwest Reply Comments at 29 and 30.

18. Next, Qwest criticizes the QSI Study's use of annual charge and shared and common cost factors (issue #3). With respect to the QSI Study's reference in a footnote to Qwest's annual charge factors ("ACFs"), Qwest notes that our calculations in the footnote are mathematically flawed.[12] We did not use Qwest's ACFs, however, in the QSI Study's calculations; they were referenced for comparison purposes only, though Qwest is correct that in our comparison we overstated the composite value of Qwest's ACF. To be sure, where Qwest uses multiple factors to recover certain costs, the ACF actually used in the QSI Study is a combination of the factors that recover the capital and maintenance costs of network equipment as well as the capital costs of the supporting land and building investment required to house the network equipment.

19. Qwest criticizes the QSI Study's use of a shared and common factor of 35 percent, by noting that its own approved shared and common cost factor in a 2006 UNE case is lower.[13] Qwest is comparing apples and oranges. While Qwest describes the factor ordered by the Minnesota PUC as its approved shared and common cost, it is really just a factor to recover Qwest's *common costs* only. In any event, QSI's consultants have reviewed dozens of shared and common cost studies in a large number of proceedings across the country for RBOCs, independent LECs, rural LECs and CLECs; while a 35 percent shared and common cost factor tends to be on the high end of what Commissions

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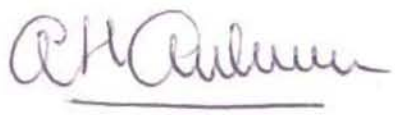
12 Qwest Reply Comments at 30.

13 Qwest Reply Comments at 30 and 31.

have ordered for RBOCs, it is conservative for CLECs, which tend to have larger overhead costs relative to their investment base.[14]

20. Last, Qwest criticizes the inclusion – though not the level – of retail related expenses in the QSI Study (issue #4), and argues that it is more appropriate to compare revenues with direct costs, without accounting for retail related expenses. The QSI Study accounted for retail related expenses because those expenses are incremental to acquiring and serving additional customers; it would not be appropriate to exclude retail related expenses.

21. We declare under penalty of perjury that the foregoing is true and correct.



August H. Ankum, Ph.D.
Executed this 5th day of March, 2010

Olesya Denney, Ph.D.
Executed this 5th day of March, 2010

[14] The shared and common cost factor is typically determined as a ratio of its overhead to its investment costs.